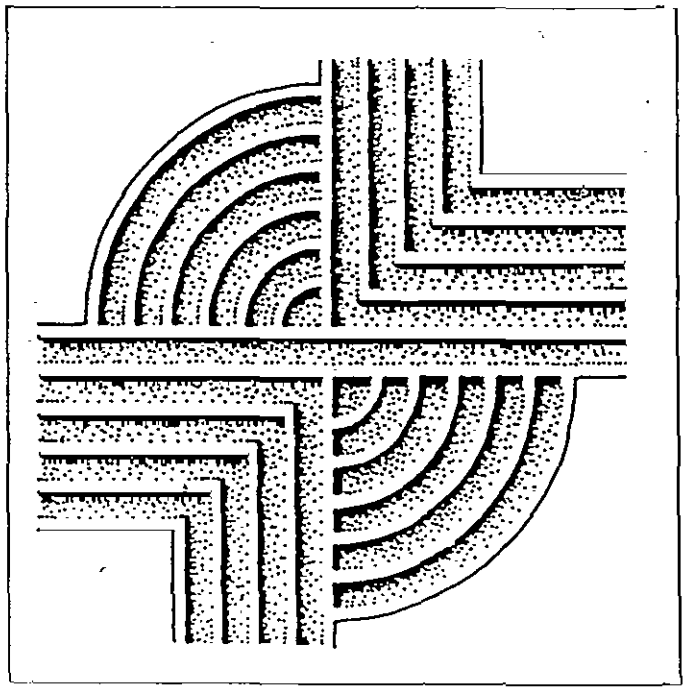
ARCHAEOLOGICAL AND ARCHITECTURAL SURVEY OF THE PROPOSED CAMP LONG SUBSTATION, AIKEN COUNTY, SOUTH CAROLINA



CHICORA RESEARCH CONTRIBUTION 292

ARCHAEOLOGICAL AND ARCHITECTURAL SURVEY OF THE PROPOSED CAMP LONG SUBSTATION, AIKEN COUNTY, SOUTH CAROLINA

Prepared By:
Michael Trinkley, Ph.D., RPA

Prepared For:
Mr. Tommy L. Jackson
Central Electric Power Cooperative
PO Box 1455
Columbia, South Carolina 29202

CHICORA RESEARCH CONTRIBUTION 292

Chicora Foundation, Inc.
PO Box 8664
Columbia, SC 29202-8664
803/787-6910
Email: chicora@bellsouth.net
www.chicora.org

April 3, 2000

This report is printed on permanent paper ∞

ABSTRACT

This study reports on an intensive archaeological and architectural survey of a 2 acre electrical substation in the north central portion of Aiken County, South Carolina. The work was conducted to assist Central Electric Power Cooperative comply with Section 106 of the National Historic Preservation Act and the regulations codified in 36CFR800.

The tract, measuring 210 feet north-south by 420 feet east-west, is to be used by the Aiken Electric Cooperative for the construction of a new substation yard. It will be situated immediately south of an existing substation, as well as an existing powerline easement. The proposed property consists of a generally level to gently rolling woodland.

The proposed substation will require the clearing and grubbing of the corridor, followed by construction of the proposed facility. These activities have the potential to affect archaeological and historical sites and this survey was conducted to identify and assess archaeological and historical sites which may be in the project corridor. For this study an area of potential effect (APE) 0.5 mile around the substation was assumed. It should be noted, however, that the area is currently affected by an existing substation.

Consultation with the S.C. Department of Archives and History revealed only one previously identified architectural resource, U/03/0000/1790013, in the APE. This structure, identified during a previous survey of this portion of Aiken County has been previously recommended not eligible by the State Historic Preservation Office. No National Register properties were present. An investigation of the archaeological site files at the S.C. Institute of Archaeology and Anthropology identified only one archaeological site, 38AK499, within the APE.

The archaeological survey of the tract incorporated shovel testing at 100-foot intervals on transects laid out at 50-foot intervals. All shovel test fill was screened through ¼-inch mesh and the shovel tests were backfilled at the completion of the study. A total of 18 shovel tests were excavated in the survey tract. No archaeological sites were identified as a result of these investigations.

The investigations confirmed the presence of the previously reported architectural site. This site, a ca. 1925 one-story frame structure with a end-to-front gable roof, has not been altered since the 1988 assessment. There are replacement porch posts, a one0-bay addition at the left elevation, and added awnings. There is also a more recent vertical-board garage in the rear yard. We recommend the site not eligible for inclusion on the National Register. The proposed substation will be largely screened from the view of this structure.

Finally, it is possible that archaeological remains may be encountered in the corridor during construction. Construction crews should be advised to report any discoveries of concentrations of artifacts (such as bottles, ceramics, or projectile points) or brick rubble to the project engineer, who should in turn report the material to the State Historic Preservation Office or to Chicora Foundation (the process of dealing with late discoveries is discussed in 36CFR800.13(b)(3)). No construction should take place in the vicinity of these late discoveries until they have been examined by an archaeologist and, if necessary, have been processed according to 36CFR800.13(b)(3).

TABLE OF CONTENTS

LIST OF FIGURES

ACKNOWLEDGMENTS

We appreciate the support and assistance of Central Electric Power Cooperative, as well as their commitment and concern for South Carolina's cultural resources. I also want to thank Mr. Robert Kidd and Mr. Tommy Jackson of Central Electric, for their continued support and confidence in Chicora Foundation.

I want to thank Mr. Tom Covington and Ms. Autumn Perkins of our staff who were responsible for assembling the background information for this project. Mr. Tom Covington also assisted in the field survey. I appreciate their dedication and thoroughness. The architectural survey was assisted by Ms. Sarah Fick of Historic Preservation Consultants in Charleston, South Carolina, who provided background materials concerning the original survey. I appreciate her assistance, patience explaining architectural issues, and timeliness.

In addition, I appreciate the assistance and cooperation of the staff of the S. C. Institute of Archaeology and Anthropology, particularly Mr. Keith Derting. We also appreciate the time and effort spent by Mr. Dan Vivian, of the S.C. Department of Archives and History, to assist us in the review of previous architectural surveys and National Register sites in the project area.

INTRODUCTION

This intensive archaeological survey of the proposed Camp Long Substation in Aiken County was conducted by Dr. Michael Trinkley of Chicora Foundation, Inc. for Mr. Tommy L. Jackson of Central Electric Power Cooperative. The work was conducted to assist Central Electric Power Cooperative comply with Section 106 of the National Historic Preservation Act and the regulations codified in 36CFR800.

The project site consists of a tract measuring about 210 feet north-south by 420 feet east-west, or about 2.0 acres, situated in north central Aiken County about 1.3 miles south of I-20 and about 2.3 miles southwest of Foxtown (Figure 1). It is situated immediately south of an existing substation and transmission line (Figure 2).

The corridor consists of a generally level tract exhibiting a gentle slope to the west and is forested in pine and mixed hardwoods. The substation to the north has been completely cleared, while a tract to the southeast (but not associated with the survey or proposed substation) has recently been clear-cut exposing more rolling topography. It appears that a small intermittent drainage which originally ran through the area of the existing substation may have been rechannalized to run through the study tract. At the time of this study, however, the ditch was completely dry and exhibited no evidence of past water. The nearest permanent water is the Edisto River swamp, about 0.6 mile to the southwest.

The corridor, as previously mentioned, is intended to be used as an electrical substation. Landscape alteration, primarily clearing, grubbing, and grading, as well as subsequent construction of the towers and other facilities, will cause considerable damage to the ground surface and any archaeological resources which may be present in the survey area.

Construction, operation, and maintenance of the substation may also have an impact on historic resources in the project area. Although the project will not remove any structures, substations (as well as other above grade projects) may detract from the visual integrity of historic properties, creating what many consider discordant surroundings. Because this substation is to be situated adjacent to an existing substation, this impact is anticipated to be modest. Nevertheless, this architectural survey uses an area of potential effect (APE) about 0.5 mile in diameter around the proposed facility.

This study, however, does not consider any future secondary impact of the project, including increased or expanded commercial or industrial development of this currently rural section of the South Carolina sand hills.

We were requested by Mr. Robert Kidd of Central Electric Power Cooperative to conduct a cultural resources survey of the tract on March 7, 2000. These investigations incorporated a review of the site files at the South Carolina Institute of Archaeology and Anthropology. As a result of that work, one previously identified site, 38AK499, was found in the APE, about 2,500 feet west of the study tract. This site, reported by a local collector, is reported to include a variety of lithics in a low-lying field overlooking the Edisto River swamp.

In addition, the master topographic maps at the South Carolina Department of Archives and History were checked to locate any NRHP buildings, districts, structures, sites, or objects, or structures surveys in the study area. There are no NRHP properties in the APE. There are, however, several previously identified architectural sites, including one within the APE. This site, U/03/0000/1790013, was recorded by Preservation Consultants as a result of their Aiken County survey in 1988. The site is a small weatherboarded house with a front gable roof. This structure was determined not eligible as a result of this initial survey (letter from Ms. Julie Turner, S. C.

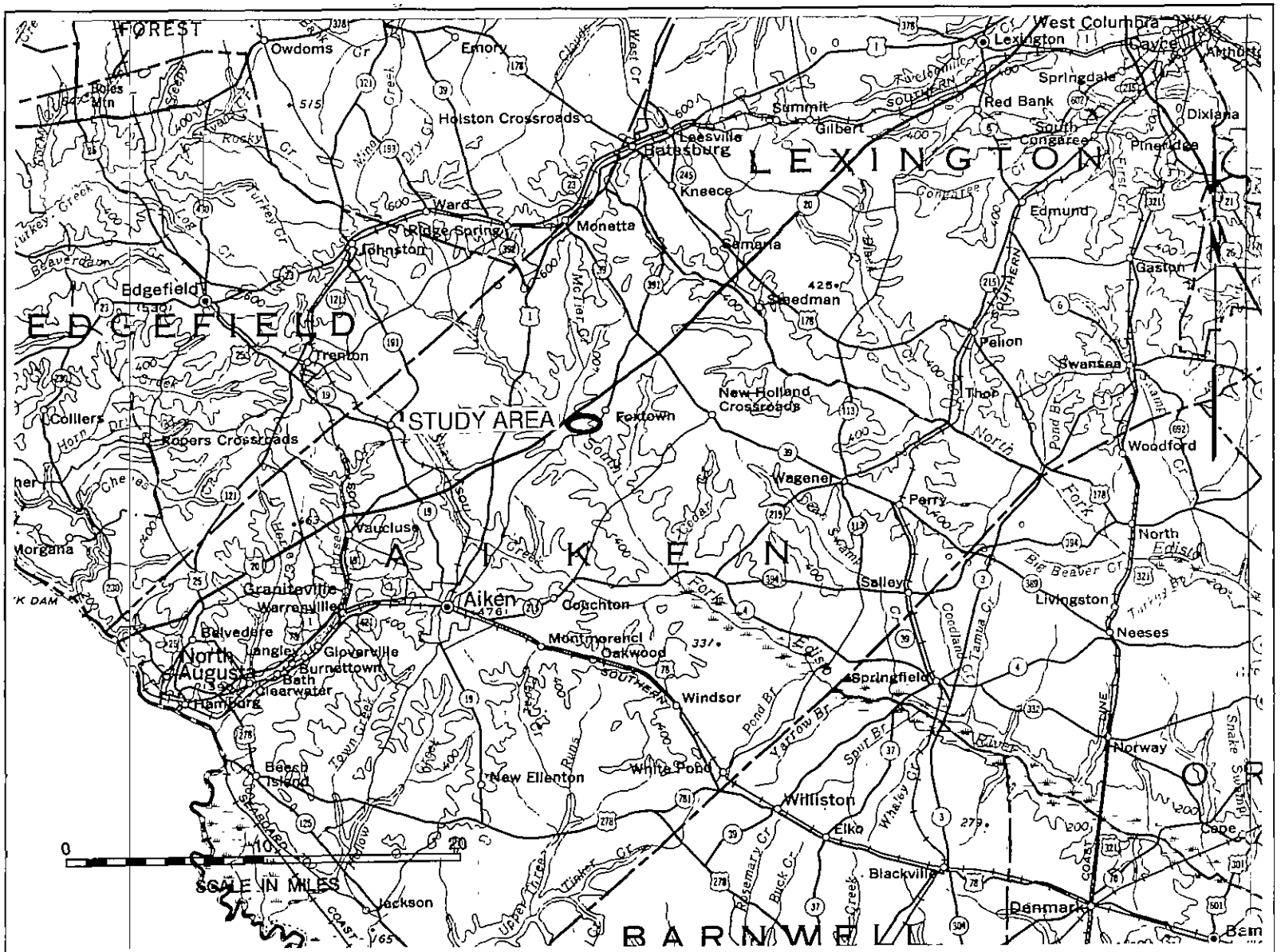


Figure 1. Location of project corridor in Aiken County, South Carolina (base map is USGS South Carolina 1:500,000).

Department of Archives and History Survey Architectural Historian to Mr. David Schneider, Preservation Consultants, dated February 14, 1989).

Archival and historical research was limited to a review of secondary sources available in the Chicora Foundation files, as well as research at the South Caroliniana Library and the Thomas Cooper Map Repository.

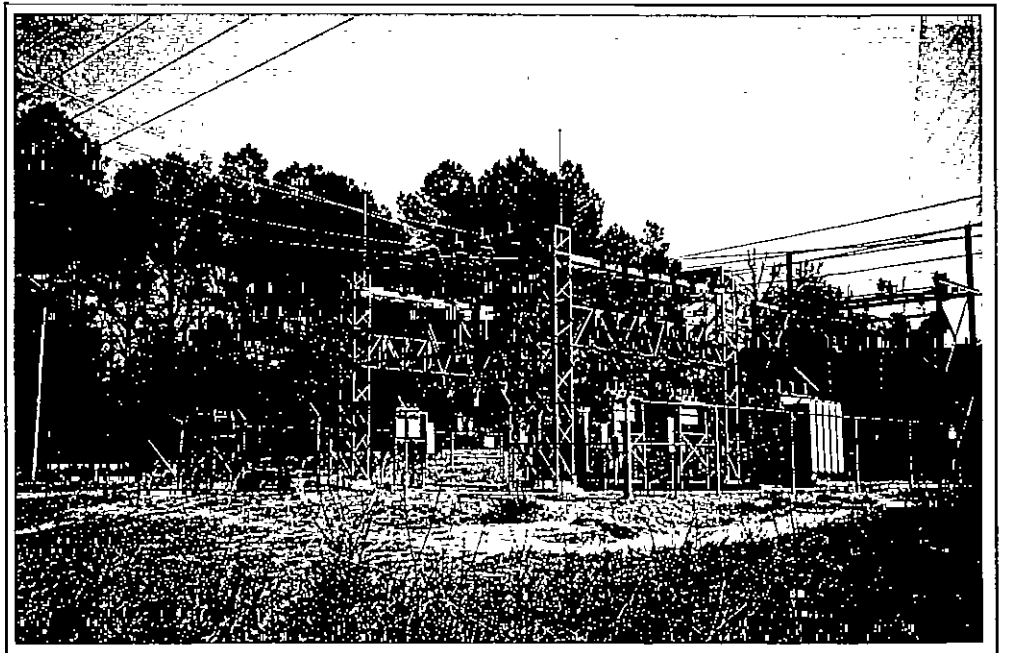


Figure 2. Existing electrical substation immediately north of the survey tract. View to the northeast.

The archaeological survey was conducted on March 23, 2000 by Dr. Michael Trinkley and Mr. Tom Covington. The architectural survey of the corridor, designed to review and validate the findings of the previous county-wide survey as well as to determine if there were additional historic sites in the APE, was also conducted on March 23.Laboratory work and report production were conducted at Chicora's laboratories in Columbia, South Carolina on March 27-28.

NATURAL SETTING

Physiography and Geology

Aiken County is located midway between the mountains and the coast. On the west the County is separated from Georgia by the Savannah River. To the north it is bordered by Edgefield and Saluda counties. To the east lays Lexington County with the border established by Chinquapin Creek and the North Edisto River. To the south Aiken County is bordered by Barnwell and Orangeburg counties. It is situated about 60 miles southwest of Columbia and 125 miles northwest of Charleston.

The topography varies dramatically as one moves from the Southern Coastal Plain in the southeastern portion of the county, which is nearly level to gently sloping, into the Carolina Sandhills, which are characterized by more moderately steep topography. The Coastal Plain accounts for about 15% of the county, while the Sandhills account for roughly 80%. In the northwestern corner of Aiken County there is a small area of Piedmont terrain, where the soils are dominantly sloping to very steep. Elevations in the county range from about 100 feet above mean sea level (AMSL) along the Savannah River to about 635 feet AMSL in the northern portions (Rogers 1985:2).

The project area is found in the area typically called the Sandhills, about 12.5 miles northeast of the City of Aiken and only 2.3 miles southwest of the small community of Foxtown in the northeast corner of the county. The project area is generally level, with only a very gradual slope up toward the northeast corner of the tract (Figure 3). Elevations in the study area are about 340 to 355 feet AMSL. The most pronounced elevation in the tract is a swale which runs roughly east-west through the area (Figure 4). This may represent an effort to rechannalize a small, intermittent drainage which has been covered up by the existing substation to the north of the study tract.

Figure 3. View of study tract , looking south-southwest.

Other than this intermittent (and very dry at the time of this study) drainage, the nearest permanent water to the tract is the South Edisto River and swamp, about 0.6 mile to the west. Other, much smaller drainages, are found to the north and south of the study area, flowing westwardly into the South Edisto swamps.

Figure 4. View of swale or drainage running through the study tract, looking southeast.

The Carolina Sandhills extends somewhat intermittently across the midlands of South Carolina, just below the fall line, in an irregular belt 5 to 30 miles wide. The fall line itself was sculpted by the strong erosion of rivers and streams passing from the hard crystalline bedrocks of the Piedmont into the loose, unconsolidated sands of the Coastal Plain. It is along this fall line where the rapidly descending rivers form shoals.

The relationship of the Sandhills to these related physiographic features has been long debated, with a common explanation being that the Sandhills are the remnants of former beaches of the Cretaceous period about 130 million years ago (Barry 1980:97). Arguing against this, however, is the realization that in many areas, the Sandhills are higher than the adjacent Piedmont. It seems more likely that this region represents the highly weathered, and discontinuous, remnants of the continental phase of the Tuscaloosa formation which dates back to the Mesozoic (Duke 1961).

Regardless, these questions of geology have little impact on the use of the Sandhills by either prehistoric or historic people. More important to our understanding of past lifeways are the soils, climate, and flora of the Sandhills.

Soils

From a soils perspective the Sandhills tend to be characterized by excessively drained sands found on 2 to 15% slopes and ridges. Well drained to moderately well drained medium to fine textured soils with slightly compacted subsoils are found at the base of these slopes, although still on gently sloping topography. Excessively drained soils with loamy, compact subsoils are typically found on positions where the slopes break to meet the streams. Overall, inherent fertility and organic content of the soils are low. Leaching of plant nutrients is rapid and the soils are strongly acid. These features tend to give the Sand Hills a rather bleak and monotonous landscape.

In the project area the soils are broadly classified as the Troup-Lakeland-Fuquay Complex. These soils are well drained and typically have a loamy subsoil. Rogers (1985:Map 18) reveals that the study area consists primarily of Troup sands. These are well drained soils that are formed in sandy marine sediments and are found on long, broad ridges and smooth side slopes. They exhibit an A horizon of grayish-brown (10YR5/2) sand to a depth of about 0.3 foot, under which is a brownish-yellow (10YR6/6) sand to a depth of about 1.8 feet.

To the north there are some areas of Vaucluse loamy sands. These are also well drained, but tend to be found on narrower ridges and adjacent side slopes. The A horizon consists of brown (10YR5/3) sands to a depth of 0.3 foot. The underlying E horizon is a

brownish-yellow (10YR6/6) sand to a depth of 0.9 foot. Below this is a B1t horizon of yellowish brown (10YR5/6) sand to a depth of at least 1.9 feet. In addition, there are some areas of Bibb soils in the study tract, primarily associated with the drainage. These soils, found in level areas adjacent to small drainages, exhibit a dark gray (10YR4/1) sand to a depth of 0.6 foot, below which is a light brownish gray (10YR6/2) sand to at least 1.1 feet. These soils tend to exhibit a somewhat reduced soil profile, largely because of the moisture in the soils.

Aiken County is just outside the area studied by Trimble (1974), although adjacent Edgefield County was found to have lost over a foot of soil to erosion and the study area is part of the Cotton Plantation Area, recognized for its high Antebellum erosive land use with Postbellum continuation. This area, because of the nature of the soils, the type of agricultural products grown, and the form of tenancy common, suffered the greatest erosion in the South. Lowry (1934) found that while the level sandy soils of the region suffered little or no erosion, those associated with the steeper slopes, or along drainageways such as nearby creeks, suffered moderate sheet erosion. Based on this information it seems likely that while the western portion of the study area has suffered little or no erosion, the eastern area is likely to have been subjected to relatively moderate rates of sheet erosion. None of the tract exhibits slopes over about 6%, so erosion overall was very limited.

Climate

Moving to the climate, this portion of South Carolina is affected by the unusual convergence of three different weather systems. Those from the west tend to stall in the Appalachian Mountains, moist warm air masses from the Gulf of Mexico move into the area, and coastal systems come in off the Atlantic Ocean. The result, however, is far from unpleasant. In fact, Aiken has been known for at nearly 150 years as a health resort, because of its weather. The average winter temperature of 48° F and the average summer temperature of 79° F confirm the generally mild climate. There are 48 inches of annual precipitation, with over falling in the growing season (Rogers 1985:1). In spite of this, Brooks and Crass suggest an element of uncertainty in the rainfall, with the amount occurring during the prime growing season of such crops as cotton or corn having been marginal. They suggest that this depressed "productivity relative to labor input" and encouraged "a broad spectrum subsistence base" (Brooks and Crass 1991:10).

Floristics

Perhaps the most noticeable feature about the Sandhills, however, is its characteristically xerophytic vegetation. Found where there is an extremely permeable layer of sandy soil which is leached of nutrients, this pattern is maintained by fire. Curiously,

Figure 5. View of the survey tract, looking to the north.

the vegetational pattern can quickly change, however, depending on such factors as the presence of clay subsoil and the depth of the water table. Barry remarks, for example:

> the complete transition from a xeric turkey oak barren to a hydric bay or pocosin can occur within a remarkably short distance, often with very little ecotone (Barry 1980:100).

While Turkey Oak Barrens and Scrub Oak Barrens occur in the vicinity of the project area, the more dominant vegetation is the Xeric Pine-Mixed Hardwood, evidencing a slightly more mesic condition (Figure 5). However, it should be cautioned that the area has undergone extensive alterations through time, so that the vegetation present today bears likely bares little resemblance to the natural vegetation of the region.

It seems likely that this region historically would have been characterized by loblolly pines, perhaps red cedar, and post oak. Hickories would have included primarily the pignut hickory. Understory plants, then as now, would include dogwood, sassafras, blackgum, and persimmon.

PREHISTORIC AND HISTORIC BACKGROUND

Previous Research

Of the 85 reports concerning Aiken County listed by Derting et al. (1991), nearly 24% (n=20) are the result of relatively small, or at least constrained, surveys associated with highway projects, while an additional 30 studies (35%) are associated with the on-going archaeological and historical research for the Department of Energy at the Savannah River Plant. Other major "themes" in the archaeological research of Aiken County include work at Fort Moore, Coker Springs, and Silver Bluff. There appears to have been no work undertaken in the immediate area of the proposed substation site.

Several previous published archaeological studies are available for the Aiken (and Barnwell) area of South Carolina to provide background, including the synthetic works from the Savannah River Plant, about 25 miles south of the project area. Sassaman et al. (1990) discuss the prehistory of the region, providing a framework of current research and site/settlement models, while Brooks and Crass (1991) provide a somewhat more modest effort for the historic period in the general vicinity. These studies should be consulted for additional information on the archaeological context of the project area.

Prehistoric Overview

Paleoindian Period

The Paleoindian Period, most commonly dated from about 12,000 to 10,000 B.P., is evidenced by basally thinned, side-notch projectile points; fluted, lanceolate projectile points, side scrapers, end scrapers; and drills (Coe 1964; Michie 1977; Williams 1965). Oliver (1981, 1985) has proposed to extend the Paleoindian dating in the North Carolina Piedmont to perhaps as early as 14,000 B.P., incorporating the Hardaway Side-Notched and Palmer Corner-Notched types, usually accepted as Early Archaic, as representatives of the terminal phase. This view, verbally suggested by Coe for a number of years, has considerable technological appeal.[1] Oliver suggests a continuity from the Hardaway Blade through the Hardaway-Dalton to the Hardaway Side-Notched, eventually to the Palmer Side-Notched (Oliver 1985:199-200). While convincingly argued, this approach is not universally accepted.

The Paleoindian occupation, while widespread, does not appear to have been intensive. Artifacts are most frequently found along major river drainages, which Michie interprets to support the concept of an economy "oriented toward the exploitation of now extinct mega-fauna" (Michie 1977:124). Survey data for Paleoindian tools, most notably fluted points, is somewhat dated, but has been summarized by Charles and Michie 1992). They reveal a widespread distribution across the state (see also Anderson 1992b:Figure 5.1) with at least several concentrations relating to intensity of collector activity. What is clear is that points are found fairly far removed from the origin of the raw material. Charles and Miche suggest that this may "imply a geographically extensive settlement system" (Charles and Michie 1992:247).

Although data are sparse, one of the more attractive theories that explains the widespread distribution of Paleoindian sites is the model tracking the replacement of a high technology forager (or HTF) adaptation by a "progressively more generalized

[1] While never discussed by Coe at length, he did observe that many of the Hardaway points, especially from the lowest contexts, had facial fluting or thinning which, "in cases where the side-notches or basal portions were missing, . . . could be mistaken for fluted points of the Paleo-Indian period" (Coe 1964:64). While not an especially strong statement, it does reveal the formation of the concept. Further insight is offered by Ward's (1983:63) all too brief comments on the more recent investigations at the Hardaway site (see also Daniel 1992).

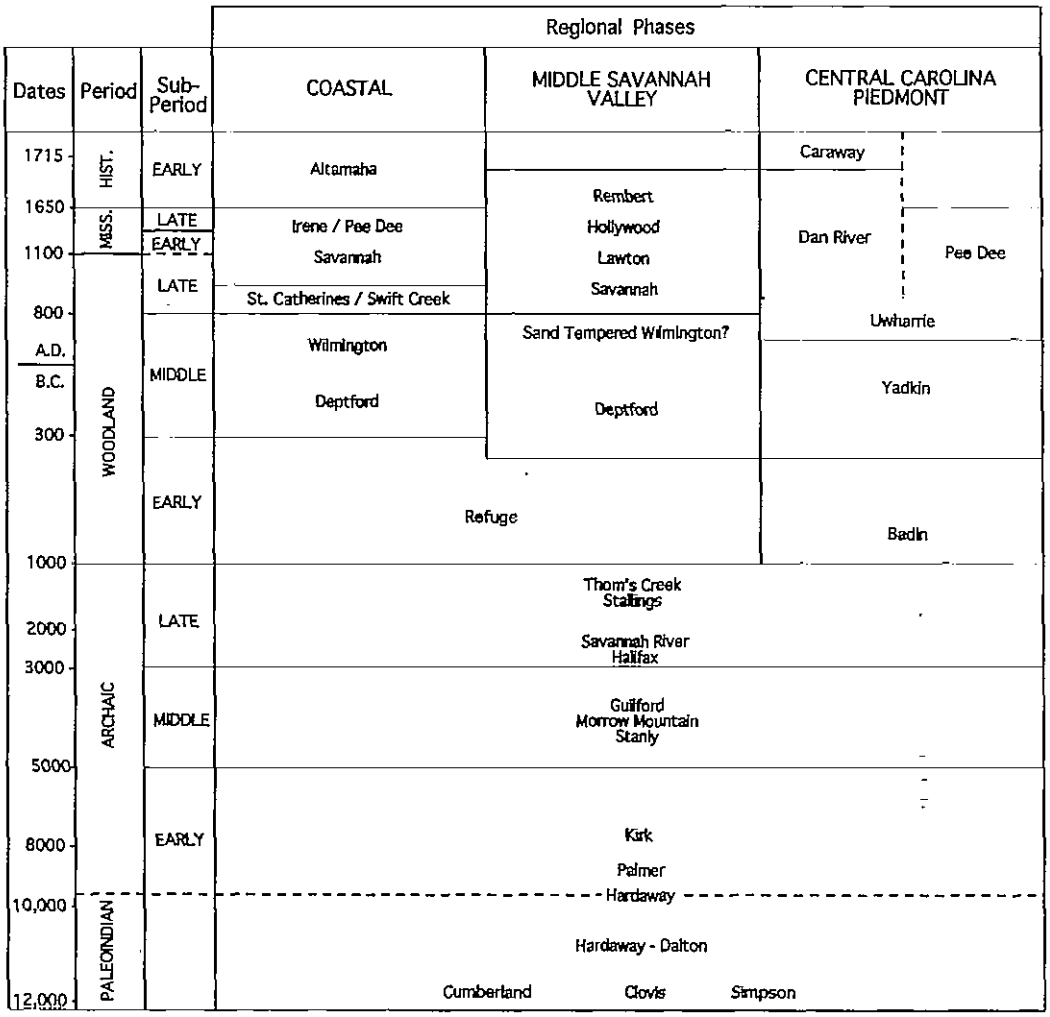


Figure 6. Generalized cultural periods for South Carolina.

band/microband foraging adaption" accompanied by increasingly distinct regional traditions (perhaps reflecting movement either along or perhaps even between river drainages) (Anderson 1992b:46).

Distinctive projectile points include lanceolates such as Clovis, Dalton, perhaps the Hardaway, and Big Sandy (Coe 1964; Phelps 1983; Oliver 1985). A temporal sequence of Paleoindian projectile points was proposed by Williams (1965:24-51), but according to Phelps (1983:18) there is little stratigraphic or chronometric evidence for it. While this is certainly true, a number of authors, such as Anderson (1992a) and Oliver (1985) have assembled impressive data sets. We are inclined to believe that while often not conclusively proven by stratigraphic excavations (and such proof may be an unreasonable expectation), there is a large body of circumstantial evidence. The weight of this evidence tends to provide considerable support.

Unfortunately, relatively little is known about Paleoindian subsistence strategies, settlement systems, or social organization (see, however, Anderson 1992b for an excellent overview and synthesis of what is known). Generally, archaeologists agree that the Paleoindian groups were at a band level of society, were nomadic, and were both hunters and foragers. While population density, based on isolated finds, is thought to have been low, Walthall suggests that toward the end of the period, "there was an increase in population density and in territoriality and that a number of new resource areas were beginning to be exploited" (Walthall 1980:30).

Archaic Period

The Archaic Period, which dates from 10,000 to 3,000 B.P.[2], does not form a sharp break with the Paleoindian Period, but is a slow transition characterized by a modern climate and an increase in the diversity of material culture. Associated with this is a reliance on a broad spectrum of small mammals, although the white tailed deer was likely the most commonly exploited animal. Archaic period assemblages, exemplified by corner-notched and broad-stemmed projectile points, are fairly common, perhaps because the swamps and drainages offered especially attractive ecotones.

Many researchers have reported data suggestive of a noticeable population increase from the Paleoindian into the Early Archaic. This has tentatively been associated with a greater emphasis on foraging. Diagnostic Early Archaic artifacts include the Kirk Corner Notched point. As previously discussed, Palmer points may be included with either the Paleoindian or Archaic period, depending on theoretical perspective. As the climate became hotter and drier than the previous Paleoindian period, resulting in vegetational changes, it also affected settlement patterning as evidenced by a long-term Kirk phase midden deposit at the Hardaway site (Coe 1964:60). This is believed to have been the result of a change in subsistence strategies.

Settlements during the Early Archaic suggest the presence of a few very large, and apparently intensively occupied, sites which can best be considered base camps. Hardaway might be one such site. In addition, there were numerous small sites which produce only a few artifacts — these are the "network of tracks"

[2] The terminal point for the Archaic is no clearer than that for the Paleoindian and many researchers suggest a terminal date of 4,000 B.P. rather than 3,000 B.P. There is also the question of whether ceramics, such as the fiber-tempered Stallings ware, will be included as Archaic, or will be included with the Woodland. Oliver, for example, argues that the inclusion of ceramics with Late Archaic attributes "complicates and confuses classification and interpretation needlessly" (Oliver 1981:20). He comments that according to the original definition of the Archaic, it "represents a preceramic horizon" and that "the presence of ceramics provides a convenient marker for separation of the Archaic and Woodland periods (Oliver 1981:21). Others would counter that such an approach ignores cultural continuity and forces an artificial, and perhaps unrealistic, separation. Sassaman and Anderson (1994:38-44), for example, include Stallings and Thom's Creek wares in their discussion of "Late Archaic Pottery." While this issue has been of considerable importance along the Carolina and Georgia coasts, it has never affected the Piedmont, which seems to have embraced pottery far later, well into the conventional Woodland period. The importance of the issue in the Sandhills, unfortunately, is not well known.

mentioned by Ward (1983:65). The base camps produce a wide range of artifact types and raw materials which has suggested to many researchers long-term, perhaps seasonal or multi-seasonal, occupation. In contrast, the smaller sites are thought of as special purpose or foraging sites (see Ward 1983:67).

Middle Archaic (8,000 to 6,000 B.P.) diagnostic artifacts include Morrow Mountain, Guilford, Stanly and Halifax projectile points. Much of our best information on the Middle Archaic comes from sites investigated west of the Appalachian Mountains, such as the work by Jeff Chapman and his students in the Little Tennessee River Valley (for a general overview see Chapman 1977, 1985a, 1985b). There is good evidence that Middle Archaic lithic technologies changed dramatically. End scrapers, at times associated with Paleoindian traditions, are discontinued, raw materials tend to reflect the greater use of locally available materials, and mortars are initially introduced. Associated with these technological changes there seem to also be some significant cultural modifications. Prepared burials begin to more commonly occur and storage pits are identified. The work at Middle Archaic river valley sites, with their evidence of a diverse floral and faunal subsistence base, seems to stand in stark contrast to Caldwell's (1958) Middle Archaic "Old Quartz Industry" of Georgia and the Carolinas, where axes, choppers, and ground and polished stone tools are very rare.

Among the most common of all Middle Woodland artifacts is the Morrow Mountain Stemmed projectile point. Originally divided into two varieties by Coe (1964:37,43) based primarily on the size of the blade and the stem. Morrow Mountain I points had relatively small triangular blades with short, pointed stems. Morrow Mountain II points had longer, narrower blades with long, tapered stems. Coe suggested a temporal sequence from Morrow Mountain I to Morrow Mountain II. While this has been rejected by some archaeologists, who suggest that the differences are entirely related to the life-stage of the point, the debate is far from settled and Coe has considerable support for his scenario.

The Morrow Mountain point is also important in our discussions since it represents a departure from the Carolina Stemmed Tradition. Coe has suggested that the groups responsible for the Middle Archaic Morrow Mountain (and the later Guilford points) were intrusive ("without any background" in Coe's words) into the North Carolina Piedmont, from the west, and were contemporaneous with the groups producing Stanly points (Coe 1964:122-123; see also Phelps 1983:23). Phelps, building on Coe, refers to the Morrow Mountain and Guilford as the "Western Intrusive horizon." Sassaman (1995) has recently proposed a scenario for the Morrow Mountain groups which would support this west-to-east time-transgressive process. Abbott and his colleagues, perhaps unaware of Sassaman's data, dismiss the concept, commenting that the shear distribution and number of these points "makes this position wholly untenable" (Abbott et al. 1995:9).

The controversy surrounding Morrow Mountain also includes its posited date range. Coe (1964:123) did not expect the Morrow Mountain to predate 6500 B.P., yet more recent research in Tennessee reveals a date range of about 7500 to 6500 B.P. Sassaman and Anderson (1994:24) observe that the South Carolina dates have never matched the antiquity of their more western counterparts and suggest continuation to perhaps as late as 5500 B.P. In fact they suggest that even later dates are possible since it can often be difficult to separate Morrow Mountain and Guilford points.

A recently defined point is the MALA. The term is an acronym standing for Middle Archaic and Late Archaic, the strata in which these points were first encountered at the Pen Point site (38BR383) in Barnwell County, South Carolina (Sassaman 1985). These stemmed and notched lanceolate points were originally found in a context suggesting a single-episode event with variation not based on temporal variation. The original discussion was explicitly worded to avoid application of a typology, although as Sassaman and Anderson (1994:27) note, the "type" has spread into more common usage. There are possible connections with both the Halifax points of North Carolina and the Benton points of the middle Tennessee River valley, while the "heartland" for the MALA appears confined to the lower middle Coastal Plain of South Carolina.

The available information has resulted in a variety of competing settlement models. Some argue for increased sedentism and a reduction of mobility (see Goodyear et al. 1979:111). Ward argues that the most appropriate model is one which includes relatively stable and sedentary hunters and gatherers "primarily adapted to the varied and rich resource base offered by the major alluvial valleys" (Ward 1983:69). While he recognizes the presence of "inter-riverine" sites, he discounts explanations which focus on seasonal rounds, suggesting "alternative explanations . . . [including] a wide range of adaptive responses." Most importantly, he notes that:

> the seasonal transhumance model and the sedentary model are opposite ends of a continuum, and in all likelihood variations on these two themes probably existed in different regions at different times throughout the Archaic period (Ward 1983:69).

Others suggest increased mobility during the Archaic (see Cable 1982). Sassaman (1983) has suggested that the Morrow Mountain phase people had a great deal of residential mobility, based on the variety of environmental zones they are found in and the lack of site diversity. The high level of mobility, coupled with the rapid replacement of these points, may help explain the seemingly large numbers of sites with Middle Archaic assemblages. Curiously, the later Guilford phase sites are not as widely distributed, perhaps suggesting that only certain micro-environments were used (cf. Ward [1983:68-69] who would likely reject the notion that substantially different environmental zones are, in fact, represented).

Recently Abbott et al. argue for a combination of these models, noting that the almost certain increase in population levels probably resulted in a contraction of local territories. With small territories there would have been significantly greater pressure to successfully exploit the limited resources by more frequent movement of camps. They discount the idea that these territories could have been exploited from a single base camp without horticultural technology. Abbott and his colleagues conclude, "increased residential mobility under such conditions may in fact represent a common stage in the development of sedentism" (Abbott et al. 1995:9).

From excavations at a Sandhills site in Chesterfield County, South Carolina, Gunn and his colleague (Gunn and Wilson 1993) offer an alternative model for Middle Archaic settlement. He accepts that the uplands were desiccated from global warming, but rather than limiting occupation, this environmental change made the area more attractive for residential base camps. Gunn and Wilson suggest that the open, or fringe, habitat of the upland margins would have been attractive to a wide variety of plant and animal species.

The Late Archaic, usually dated from 6,000 to 3,000 or 4,000 B.P., is characterized by the appearance of large, square stemmed Savannah River projectile points (Coe 1964). These people continued to intensively exploit the uplands much like earlier Archaic groups with, the bulk of our data for this period coming from the Uwharrie region in North Carolina.

One of the more debated issues of the Late Archaic is the typology of the Savannah River Stemmed and its various diminutive forms. Oliver, refining Coe's (1964) original Savannah River Stemmed type and a small variant from Gaston (South 1959:153-157), developed a complete sequence of stemmed points that decrease uniformly in size through time (Oliver 1981, 1985). Specifically, he sees the progression from Savannah River Stemmed to Small Savannah River Stemmed to Gypsy Stemmed to Swannanoa from about 5000 B.P. to about 1,500 B.P. He also notes that the latter two forms are associated with Woodland pottery.

This reconstruction is still debated with a number of archaeologists expressing concern with what they see as typological overlap and ambiguity. They point to a dearth of radiocarbon dates and good excavation contexts at the same time they express concern with the application of this typology outside the North Carolina Piedmont (see, for a synopsis, Sassaman and Anderson 1990:158-162, 1994:35).

In addition to the presence of Savannah River points, the Late Archaic also witnessed the introduction of steatite vessels (see Coe 1964:112-113; Sassaman 1993), polished and pecked stone artifacts, and grinding stones. Some also include the introduction of fiber-

tempered pottery about 4000 B.P. in the Late Archaic (for a discussion see Sassaman and Anderson 1994:38-44). This innovation is of special importance along the Georgia and South Carolina coasts, but seems to have had only minimal impact in the uplands of South or North Carolina.

There is evidence that during the Late Archaic the climate began to approximate modern climatic conditions. Rainfall increased resulting in a more lush vegetation pattern. The pollen record indicates an increase in pine which reduced the oak-hickory nut masts which previously were so widespread. This change probably affected settlement patterning since nut masts were now more isolated and concentrated. From research in the Savannah River valley near Aiken, South Carolina, Sassaman has found considerable diversity in Late Archaic site types with sites occurring in virtually every upland environmental zone. He suggests that this more complex settlement pattern evolved from an increasingly complex socio-economic system. While it is unlikely that this model can be simply transferred to the Sandhills of South Carolina without an extensive review of site data and micro-environmental data, it does demonstrate one approach to understanding the transition from Archaic to Woodland.

Woodland Period

As previously discussed, there are those who see the Woodland beginning with the introduction of pottery. Under this scenario the Early Woodland may begin as early as 4,500 B.P. and continued to about 2,300 B.P. Diagnostics would include the small variety of the Late Archaic Savannah River Stemmed point (Oliver 1985) and pottery of the Stallings and Thoms Creek series. These sand tempered Thoms Creek wares are decorated using punctations, jab-and-drag, and incised designs (Trinkley 1976). Also potentially included are Refuge wares, also characterized by sandy paste, but often having only a plain or dentate-stamped surface (Waring 1968). Others would have the Woodland beginning about 3,000 B.P. and perhaps as late as 2,500 B.P. with the introduction of pottery which is cord-marked or fabric-impressed and suggestive of influences from northern cultures.

There remains, in South Carolina, considerable ambiguity regarding the pottery series found in the Sandhills and their association with coastal plain and piedmont types. The earliest pottery found at many sites may be called either Deptford or Yadkin, depending on the research or their inclination at any given moment.

The Deptford phase, which dates from 3050 to 1350 B.P., is best characterized by fine to coarse sandy paste pottery with a check stamped surface treatment. The Deptford settlement pattern involves both coastal and inland sites.

Inland sites such as 38AK228-W, 38LX5, 38RD60, and 38BM40 indicate the presence of an extensive Deptford occupation on the Fall Line and the Inner Coastal Plain/Sand Hills, although sandy, acidic soils preclude statements on the subsistence base (Anderson 1979; Ryan 1972; Trinkley 1980a). These interior or upland Deptford sites, however, are strongly associated with the swamp terrace edge, and this environment is productive not only in nut masts, but also in large mammals such as deer. Perhaps the best data concerning Deptford "base camps" comes from the Lewis-West site (38AK228-W), where evidence of abundant food remains, storage pit features, elaborate material culture, mortuary behavior, and craft specialization has been reported (Sassaman et al. 1990:96-98; see also Sassaman 1993 for similar data recovered from 38AK157).

Further to the north and west, in the Piedmont, the Early Woodland is marked by a pottery type defined by Coe (1964:27-29) as Badin.[3] This pottery is identified as having very fine sand in the paste with an occasional pebble. Coe identified cord-marked, fabric-marked, net-impressed, and plain surface finishes. Beyond this pottery little is known about the makers of the Badin wares and relatively few of these sherds are

[3] The ceramics suggest clear regional differences during the Woodland which seem to only be magnified during the later phases. Ward (1983:71), for example, notes that there "marked distinctions" between the pottery from the Buggs Island and Gaston Reservoirs and that from the south-central Piedmont.

reported from South Carolina sites.

Somewhat more information is available for the Middle Woodland, typically given the range of about 2,300 B.P. to 1,200 B.P. In the Piedmont and even into the Sand Hills, the dominant Middle Woodland ceramic type is typically identified as the Yadkin series. Characterized by a crushed quartz temper the pottery includes surface treatments of cord-marked, fabric-marked, and a very few linear check-stamped sherds (Coe 1964:30-32). It is regrettable that several of the seemingly "best" Yadkin sites, such as the Trestle site (31An19) explored by Peter Cooper (Ward 1983:72-73), have never been published.

Yadkin ceramics are associated with medium-sized triangular points, although Oliver (1981) suggests that a continuation of the Piedmont Stemmed Tradition to at least 1650 B.P. coexisted with this Triangular Tradition. The Yadkin in South Carolina has been best explored by research at 38SU83 in Sumter County (Blanton et al. 1986) and at 38FL249 in Florence County (Trinkley et al. 1993)

In some respects the Late Woodland (1,200 B.P. to 400 B.P.) may be characterized as a continuation of previous Middle Woodland cultural assemblages. While outside the Carolinas there were major cultural changes, such as the continued development and elaboration of agriculture, the Carolina groups settled into a lifeway not appreciably different from that observed for the previous 500-700 years. From the vantage point of the Middle Savannah Valley Sassaman and his colleagues note that, "the Late Woodland is difficult to delineate typologically from its antecedent or from the subsequent Mississippian period" (Sassaman et al. 1990:14). This situation would remain unchanged until the development of the South Appalachian Mississippian complex (see Ferguson 1971).

Historic Overview

The survey tract (presently in Aiken County) is in what is historically known as the Orangeburg District. Although exploration of the Savannah River Valley began as early as the sixteenth century (DePratter 1989), substantial settlement of the area did not begin until after the Yamassee Indian War (1715-1718). By the mid-eighteenth century, cattle ranchers and subsistence farmers cleared land and established small farms and plantations (Kovacik and Winberry 1987:69-71), and by the eve of the American Revolution, cattle ranching was well established in the area (Brooks 1981).

In 1826 Mills remarks that the district was largely unsettled until 1735, when a number of German immigrants arrived, followed by a second wave in 1769. Mills observes that north of these settlements, on the edges of the district, there were few whites and the area was largely inhabited by Cherokee and Catawba Indians (Mills 1972:657 [1826]). Mills, while commenting on neighboring Edgefield District, mentioned that,

> There is nothing that distinguishes the settlement of Edgefield from that of other districts in the upper and middle country. They were all gradually settled as the tide of emigration rolled from the north and east (Mills 1972:519-520 [1826]).

In the first quarter of the nineteenth century Mills notes that the district, in the shape of "a kind of peninsula, or long, narrow strip" ran between the South Edisto on one side and the North Edisto on the other.

While Tory forces were quite active in the adjacent Edgefield District during the American Revolution, only two skirmish took place in Aiken County. These were in conjunction with the American capture of Augusta from the British, and occurred at Beech Island and Galphin's Fort (Brooks 1984).

By 1800 the Orangeburg District population consisted of 5,957 whites, 4,110 slaves, and 88 free blacks, for a total of 10,155. By 1820 the population had increased to 15,653, including 6,760 whites and 8,829 African American slaves. A similar situation was occurring in adjacent Edgefield District, where in 1800 there were 13,063 whites and 5,006 African-American slaves. In twenty years the population increased by about 7,000 with 12,864 whites, 19,198 slaves (Mills 1972:527, 664 [1826]). Although the population decreases into the middle of the nineteenth century,

African American slaves still dominated the landscape, accounting for nearly 59% of the population (DeBow 1854:302). The decline in population was largely a result of planters and farmers leaving the exhausted soils of South Carolina and moving to Georgia, Alabama, and Mississippi (Kovacik and Winberry 1987:92-93).

Mills' *Atlas* shows the project area, situated between the Rocky Springs Creek and McTyer Creek to be vacant lands (Figure 7). The map, however, suggests that there were a number of farms nearby, based on presence of eight mills in the general area. The few settlements shown seem to cluster on the main road running the length of the district and connecting the town of Orangeburg with the towns of Cambridge (Ninety Six) and Richardsonville in Edgefield District.

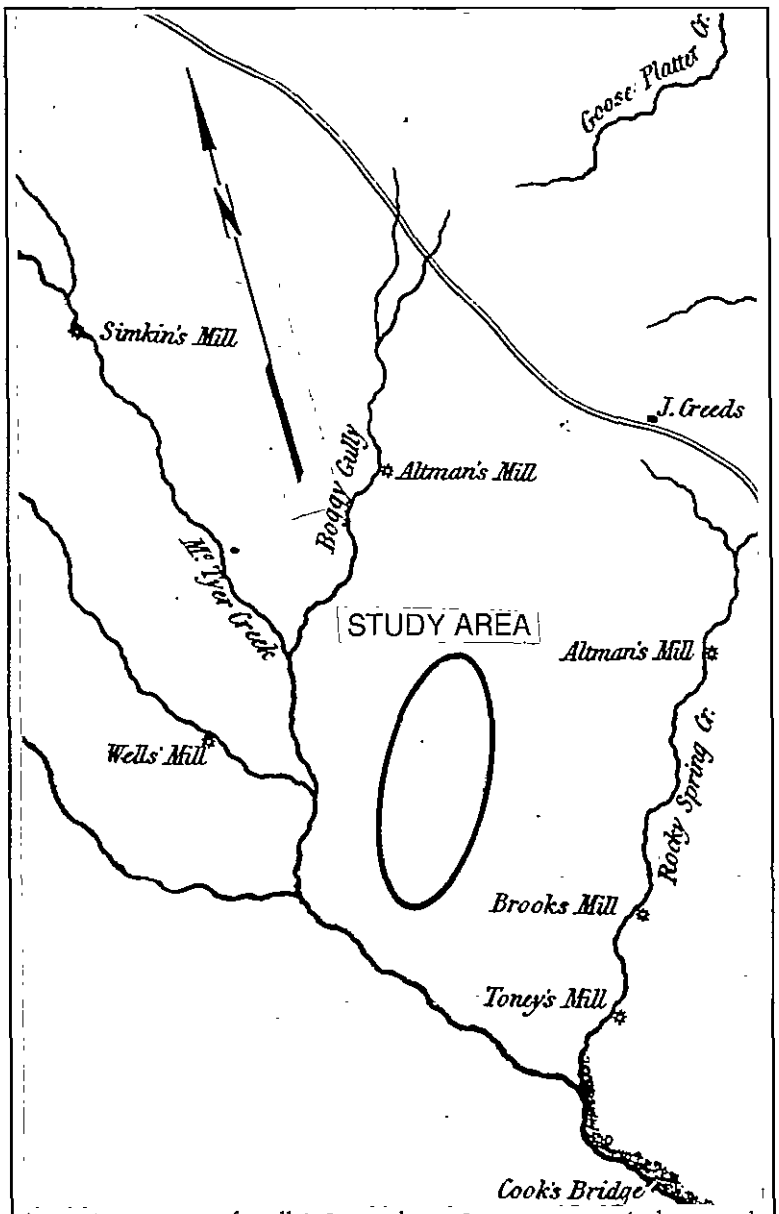


Figure 7. Portion of Mills' Orangeburg District in 1826 showing the study area.

The area saw some activity during the Civil War. General H.J. Kilpatrick of the Union Army fought General Joseph Wheeler's troops at Blackville, Williston, and Aiken during his threat to Augusta (Wallace 1951:548).

It was not unit the end of the Civil War that Aiken came under attack. Will the fall of Savannah, General O.H. Hill was placed in charge of the Confederate forces in Augusta, where it was thought that Sherman's troops would surely head in order to destroy the vast stores of cotton. By late January 1865 Union forces were rapidly advancing through South Carolina, having taken Pocotaligo on January 14th and breaking the Charleston-Savannah railway for the first time during the war. The Confederate forces established a defensive line near Three Runs in Aiken County, near where the Savannah River Plant site is today. The Union forces reached Allendale by the 31st and succeeded in taking Blackville, breaking the Charleston-Hamburg Railroad connection.

Union troops, including the 14th and the 20th Corps as well as Major General Hugh Judson Kilpatrick's cavalry, began following the railway line to the west, leading directly to Aiken. By February 10 Kilpatrick's cavalry reached Johnson's Turnout (at what is today Montmorenci), while the Confederate forces hastily established a line about two miles east of Aiken. Practicing total war, the country side was pillaged and

the railway was destroyed. Kilpatrick remarked in a message to Sherman that "this is splendid country; plenty of forage and supplies" (quoted in Boylston n.d.:8). Efforts to advance through Aiken were foiled by Confederate troops under the command of General Joseph Wheeler. While Aiken was saved, as was the Graniteville cotton mill, and the stores of cotton in August, South Carolina was lost.

Exhausted by war and stunned by the upheaval of their economic and social system the residents of Orangeburg District, as well as the rest of the state, were in a state of confusion and hardship. Immediately after the Civil War cotton prices peaked, causing many Southerners to plant cotton again, in the hope of recouping losses from the War. The single largest problem across the South, however, was labor. While some freedmen stayed on to work, others, apparently many others, left.

The hiring of freedmen began immediately after the war, with variable results. The Freedmen's Bureau attempted to establish a system of wage labor, but the effort was largely tempered by the enactment of the Black Codes by the South Carolina Legislature in September 1865. These Codes allowed nominal freedom, while establishing a new kind of slavery, severely restricting the rights and freedoms of the black majority (see Orser 1988:50). Added to the Codes were oppressive contracts which reinforced the power of the plantation owner and degraded the freedom of the Blacks. The freedmen found power, however, in their ability to break their contracts and move to a new plantation, beginning a new contract. With the high price of cotton and the scarcity of labor, this mechanism caused tremendous agitation to the plantation owners.

Gradually owners turned away from wage labor contracts to two kinds of tenancy — sharecropping and renting. While very different, both succeeded in making land ownership very difficult, if not impossible, for the vast majority of Blacks. Sharecropping required the tenant to pay his landlord part of the crop produced, while renting required that he pay a fixed rent in either crops or money. In sharecropping the tenant supplied the labor and one-half of the fertilizer, the landlord supplied everything else — land, house, tools, work animals, animal feed, wood for fuel, and the other half of the needed fertilizer. In return the landlord received half of the crop at harvest. This system became known as "working on halves," and the tenants as "half hands," or "half tenants."

In share-renting, the landlord supplied the land, housing, and either one-quarter or one-third of the fertilizer costs. The tenant supplied the labor, animals, animal feed, tools, seed, and the remainder of the fertilizer. At harvest the crop was divided in proportion to the amount of fertilizer that each party supplied. A number of variations on this occurred, one of the most common being "third and fourth," where the landlord received one-fourth of the cotton crop and one-third of all other crops. In cash-renting the landlord provided the land and housing, with the renter providing everything else and paying a fixed per-acre rent in cash.

After the Civil War the study area was shifted from Orangeburg to Lexington County, although Aiken was not created until 1871 when parts of adjoining Edgefield, Lexington, Barnwell, and Orangeburg counties.

In the 1880s Aiken County had three mills (Graniteville, Vaucluse, and Langley). Cotton was being produced in large amounts and it was estimated that the average cost of producing merchantable cotton was about eight cents a pound and 40 dollars to bale 500 pounds. It appears that a large portion of the manufacturing in the county was milling grain or producing lumber and turpentine. Of the 31 other manufacturing establishments there were 12 grist mills, 12 lumber mills, 6 turpentine establishments, and one paper mill (Anonymous 1884). There was, in addition, one granite quarry, associated with Graniteville Manufacturing Company.

Cotton continued to be the major crop in the area. In 1900 Aiken reported 63,127 acres devoted to cotton (representing nearly a third of the county's improved farm acreage) with a yield of 28,223 bales, placing it 11th in the state. The only crop with more acreage was corn, planted on 75,966 acres. Corn production, at 703,080 bushels. Only Orangeburg, Sumter, and Barnwell produced more corn than Aiken.

The 1939 General Highway and Transportation Map of Aiken County (Figure 8) reveals that there was a

farm, along with at least one tenant structure on the east side of Muddy Branch Road, potentially in the survey vicinity. In addition, a similar farm complex was situated on the west side of the road, in the general vicinity of the previously reported architectural site.

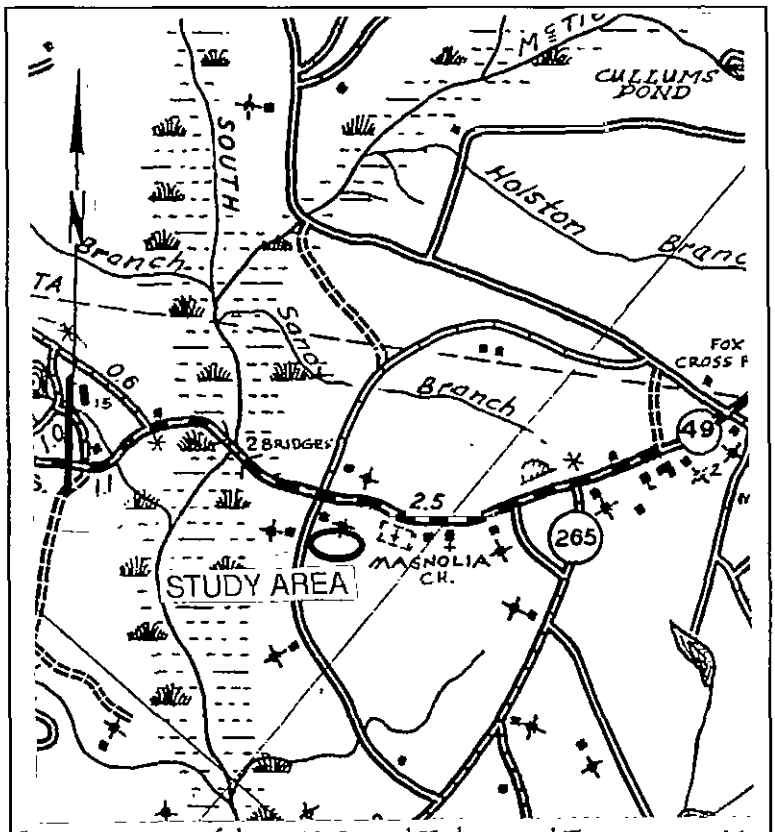


Figure 8. Portion of the 1939 *General Highway and Transportation Map of Aiken County* showing the project area.

Recently Cabak and her colleagues have examined the architectural development of farmsteads in the Aiken Plateau area (Cabak et al. 1999). They distinguish "folk styles" from "national styles," using the definitions common to the field: folk forms being "designed without a conscious attempt to mimic current fashion" (McAlester and McAlester 1984:5), while national forms reveal "the influence of shapes, materials, detailing, or other features that make up an architectural style that was currently in vogue" (McAlester and McAlester 1984:5).

Of course, this approach is open to criticism. For example, some would argue that anything as "pure" as McAlester and McAlester's folk form exists, that it is virtually impossible to design without some degree of influence being exerted by one's neighbors. It also leaves little room for forms which are vernacular interpretations of prevailing national styles.

Regardless, Cabak et al. (1999)note that the common folk or vernacular styles of the Aiken region prior to 1950 include three with considerable time depth: the I-house, the hall-and-parlor house, and Cumberland house (this latter style being a frame version of an earlier log style). They consider two styles, the shotgun house and the side-gabled house, to be transitional forms found in mid-nineteenth through early twentieth century contexts. The final three vernacular forms, the southern bungalow, front-gabled, and cross gabled houses, were popular in the early twentieth century (Cabak et al. 1999:26). The only national form noted in the area was the Craftsman style — that became popular nationwide in the first quarter of the twentieth century.

The vast majority of the Aiken area houses fall into the vernacular or folk category, with only 5% representing national forms. Although these folk houses dominate the pre-1950 landscape, 97% of tenant houses fell into the category of early vernacular (I-houses, hall-and-parlor houses, and Cumberland houses), while only 43% of the operator houses were of these early vernacular forms. The modern styles were found at only 3% of the tenant farms, but 27% of the operator farmsteads.

Whether this represents poverty vs. wealth, acceptance of new ideas vs. rejection, or perhaps even a dichotomy of power is unclear, but as they emphasize, architectural differences definitely existed between rural tenure classes" (Cabak et al. 1999:26). They take these changes as reflecting almost evolutionary differences in farmsteads, which could be classified as traditional, transitional, or modern (Cabak et al. 1999:31).

RESEARCH METHODS AND FINDINGS

Introduction

As previously indicated, the primary goals of this survey are to identify, record, and assess the significance of archaeological sites within the proposed substation footprint. No major analytical hypotheses were created prior to the field work and data analysis. This research design proposed for this study is fundamentally explorative and explicative.

Field Survey

The survey area was wooded, but was clearly marked in the field with double blue blazes on trees at the property lines. In addition, the tract had been surveyed and we were provided with a plat of the tract.

The 2.0 acre tract was examined using a systematic intensive survey methodology that examined the entire acreage for archaeological and historical resources. An archaeological survey was conducted using shovel tests placed at 100 foot intervals on transects spaced at 50 foot intervals. A series of eight transects were established running from south to north on the parcel, for a total of 18 shovel tests (Figure 9).

All shovel tests were approximately one-foot square and were excavated to subsoil, usually about 1.5 feet below the surface. All soils were screened through ¼-inch mesh and soil profiles were recorded as appropriate, using Munsell soil colors. All shovel tests were backfilled at the completion of the work.

Results of the Archaeological Survey

The investigation revealed that the proposed property slopes up to the east and that there was a gentle swale or drainage area running roughly east-west through the tract. As a result of this, some differences were observed in the shovel test profiles. In general we found the soils in the western portion of the tract to be more consistent with Troup Sands, exhibiting a grayish brown (10YR5/2) sand about 0.4 foot overlying a brownish-yellow (10YR6/6) sand to a depth of at least 1.5 feet. The soils in the eastern portion of the tract included Bibb soils in the depressions, characterized by about 0.5 foot of dark gray (10YR4/1) sand overlying an additional 1.5 foot of light brownish gray (10YR6/2) sand. The dark surface soils are suggestive of reduction, likely from the moisture in the soils. Also found in this area were Vaucluse soils, with profiles of about 0.2 to 0.4 foot of brown (10YR5/3) sand overlying an additional 0.6 foot of brownish yellow (10YR6/6) sand on top of a yellowish brown (10YR5/6) and.

The field investigation revealed clear-cut logging to the east, southeast, and south. In these areas upland soils were completely exposed with some initial sheet erosion. To the north there is a powerline corridor and just beyond the existing substation. The topography has been extensively altered, but it is through this general area that a small drainage originally ran. Today the powerline corridor tends to be somewhat low and wet. To the southwest of the proposed tract, and outside of its borders, is an area of modern trash, including soda bottles, metal, cans, and other debris. None of these materials were collected.

None of the shovel tests, however, produced any cultural remains.

Results of the Architectural Survey

During 1988 an architectural survey of eastern Aiken County was conducted by Preservation Consultants (Fick and Schneider 1988). As previously discussed only one structure was identified in the APE for this project, U/03/0000/1790013. This structure was found on the west side of county road 703 (previously known as Wire Road, today called Muddy Branch Road), 0.2 mile south of its junction with S-49 (Two Notch Road). The site was described as a one story front gabled roof structure. The porch is a separate gabled element covering a single bay. Built about 1925,

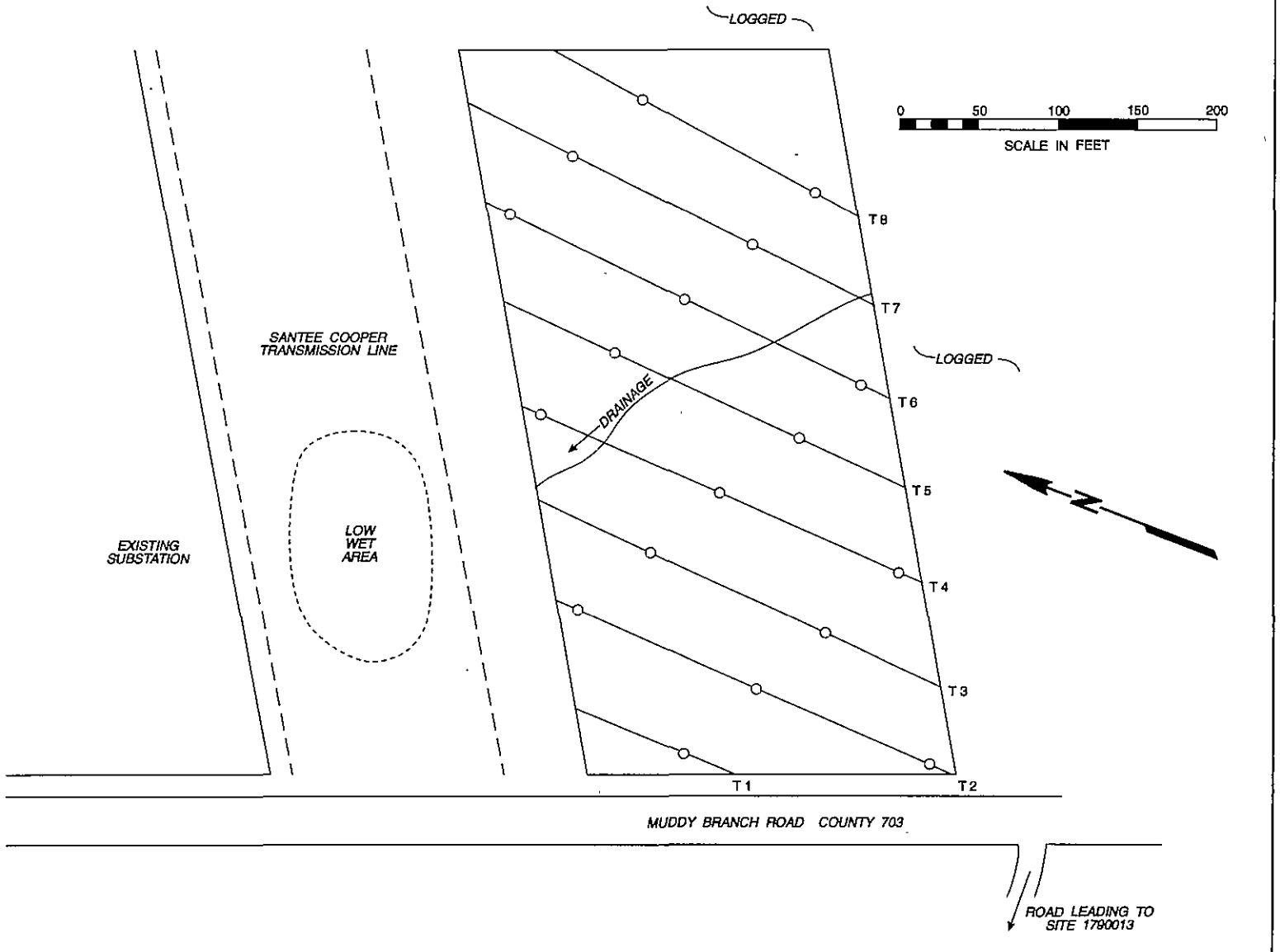


Figure 9. Map of the survey parcel showing shovel test locations.

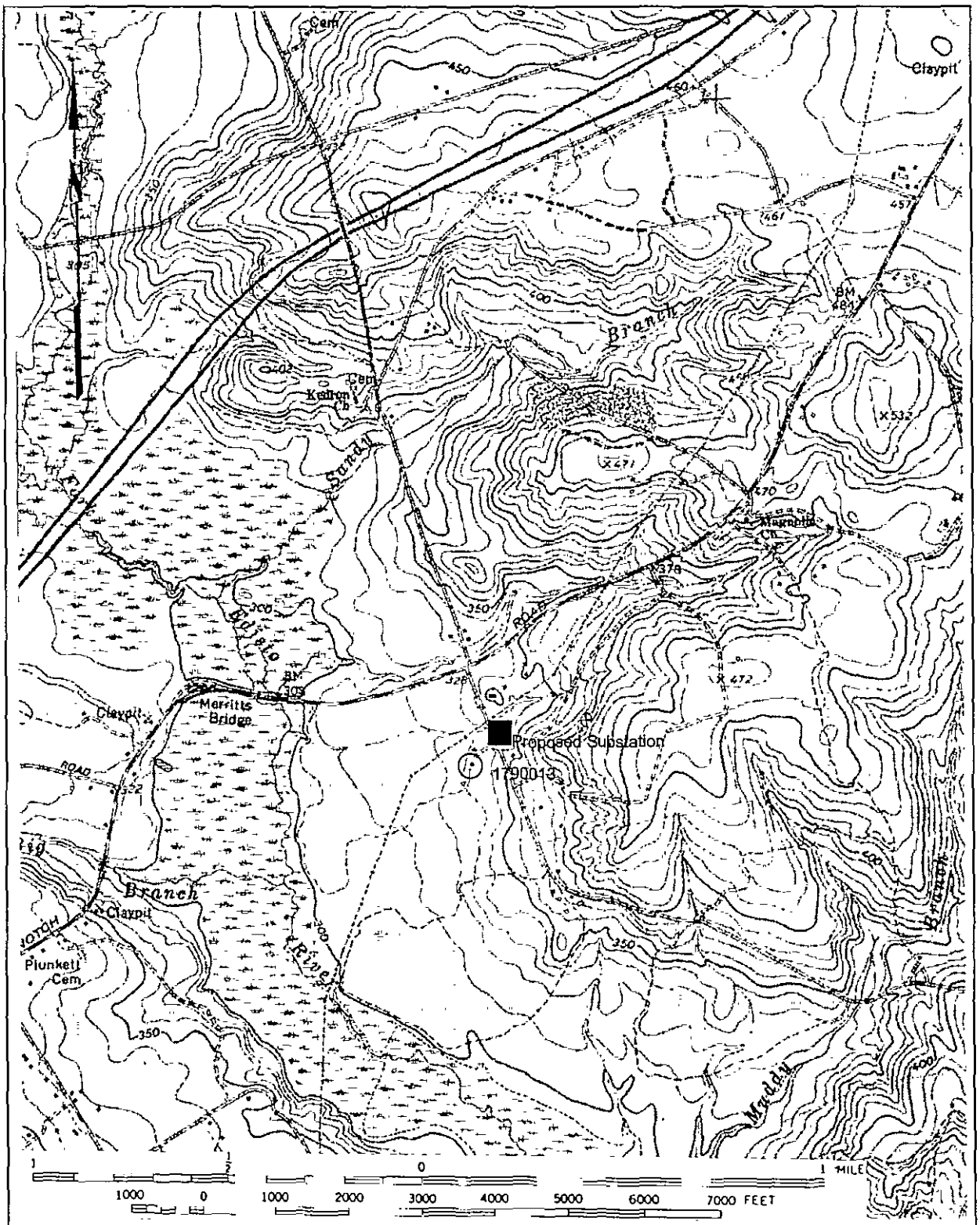


Figure 10. Vicinity of the survey tract and location of structure 1790013 (base map is USGS Foxtown 7.5').

Figure 11. North elevation of structure 1790013, looking south.

the structure was reported to have triangular louvered attic vents in the front and porch gable ends, and exposed rafter ends and triangular knee braces at the eaves. The single and double windows have 6/6 panes and the house was constructed of weatherboards.

This structure was recommended as not eligible for inclusion on the National Register and this was concurred with by the State Historic Preservation Office (letter from Ms. Julie Turner, Survey Architectural Historian to Mr. David Schneider, dated February 14, 1989).

During our investigations this structure was revisited since it was noted to be within the APE. The structure is essentially the same as originally reported in 1988 (Figures 11 and 12). As was reported initially, alterations include replacement porch posts, a one bay addition at the left elevation, and an awning on a rear window on the right elevation (not visible in these photographs). The ca. 1950 vertical-board garage is likewise still present. No additional assessment or comments seem appropriate for this structure and we continue to recommend the structure not eligible.

Standing at the proposed substation site the structure was just barely visible through screening vegetation. The existing substation and associated powerline are currently visible from the structure. It is unlikely that the proposed substation will have any additional quantifiable visual affect on the view scape.

Figure 12. South and west elevations of structure 1790013, looking northeast.

SUMMARY AND RECOMMENDATIONS

This study involved the examination of a 2.0 acre tract situated in north central Aiken County, South Carolina. The tract is proposed for the construction of an electrical substation to be used by the Aiken Power Cooperative. This report, conducted for Carolina Power Cooperative, provides the results of that investigation and is intended to assist that organization comply with their historic preservation responsibilities.

While surrounding areas had been extensively logged, the study tract was found to be in good condition with a light covering of pine and mixed hardwoods. The archaeological survey included close interval shovel testing, which revealed intact soils, but no evidence of cultural remains on the study tract.

It is likely that the absence of prehistoric remains is associated with the distance to any permanent water source, as well as the low, rolling topography. It seems more likely that prehistoric sites will be found further upslope, on the ridge crest. Historic sites, while associated with the road network, are not present on the survey tract. One farm stead appears to have been destroyed by previous development activities nearby, while the farmstead to the west has been recorded in a previous county-wide architectural survey (Fick and Schneider 1988) as U/03/0000/1790013.

This particular structure is situated about 500 feet west-southwest of the study tract. Our investigations reveal that it is essentially unchanged since the 1988 survey. As was recommended at that time, we also recommend the site as not eligible for inclusion on the National Register of Historic Places. Moreover, it seems likely that the structure will be largely screened from the new substation, although both the existing substation and the existing powerlines associated with the substation are currently visible.

It is possible that archaeological remains may be encountered in the substation during construction activities. As always, the utility's contractors should be advised to report any discoveries of concentrations of artifacts (such as bottles, ceramics, or projectile points) or brick rubble to the project engineer, who should in turn report the material to the State Historic Preservation Office, or Chicora Foundation (the process of dealing with late discoveries is discussed in 36CFR800.13(b)(3)). No further land altering activities should take place in the vicinity of these discoveries until they have been examined by an archaeologist and, if necessary, have been processed according to 36CFR800.13(b)(3).

SOURCES CITED

Abbott, Lawrence E., Jr., John S. Cable, Mary Beth Reed, and Erica E. Sanborn

1995 *An Archaeological Survey and Testing of the McLean-Thompson Property Land Acquisition, and the Ambulatory Health Care Clinic Project, Fort Bragg, Cumberland County, North Carolina*. Technical Report 349. New South Associates, Stone Mountain, Georgia.

Anderson, David G.

1979 *Excavations at Four Fall Line Sites: The Southeastern Beltway Project.* Commonwealth Associates, Inc., Jacksonville, Michigan. Submitted to the South Carolina Department of Highways and Public Transportation, Columbia.

1992a A History of Paleoindian and Early Archaic Research in the South Carolina Area. In *Paleoindian and Early Archaic Period Research in the Lower Southeast: A South Carolina Perspective*, edited by David G. Anderson, Kenneth E. Sassaman, and Christopher Judge, pp. 7-18. Council of South Carolina Professional Archaeologists, Columbia.

1992b Models of Paleoindian and Early Archaic Settlement in the Lower Southeast. In *Paleoindian and Early Archaic Period Research in the Lower Southeast: A South Carolina Perspective*, edited by David G. Anderson, Kenneth E. Sassaman, and Christopher Judge, pp. 28-47. Council of South Carolina Professional Archaeologists, Columbia.

1994 *The Savannah River Chiefdoms: Political Change in the Late Prehistoric Southeast*. University of Alabama Press, Tuscaloosa.

Anderson, David G., Charles E. Cantley, and A. Lee Novick

1982 *The Mattassee Lake Sites: Archaeological Investigations Along the Lower Santee River in the Coastal Plain of South Carolina.* Commonwealth Associates, Jackson, Michigan.

Anonymous

1884 *South Carolina in 1884: A View of the Industrial Life of the State*. The News and Courier, Charleston, South Carolina.

Barry, John M.

1980 *Natural Vegetation of South Carolina*. University of South Carolina Press, Columbia.

Blanton, Dennis B., Christopher T. Espenshade, and Paul E. Brockington, Jr.

1986 *An Archaeological Study of 38SU83: A Yadkin Phase Site in the Upper Coastal Plain of South Carolina*. Garrow and Associates, Inc., Atlanta.

Boylston, Raymond P., Jr.

n.d. *The Battle of Aiken*. n.p, n.p.

Brooks, Richard

1981 *Initial Historic Overview of the Savannah River Plant, Aiken and Barnwell Counties, South Carolina.*

Research Manuscript Series 170. S.C. Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

1984 An Intensive Archaeological Survey of the Proposed L-Lake Phase I Areas: Savannah River Plant, Barnwell County, South Carolina. Ms. on file, S.C. Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

Brooks, Richard and David Crass

1992 *A Desperate Poor Country: History and Settlement Pattering on the Savannah River Site, Aiken and Barnwell Counties, South Carolina.* South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

Cabak, Melanie A., Mark D. Groover, and Mary M. Inkrot

1999 Rural Modernization During the Recent Past: Farmstead Archaeology in the Aiken Plateau. *Historical Archaeology* 33(4):19-43.

Cable, John S.

1982 Differences in Lithic Assemblages of Forager and Collector Strategies. In *Archaeological Survey and Reconnaissance Within the Ten-Year Floodpool Harry S. Truman Dam and Reservoir*, edited by Richard Taylor. Report submitted to the U.S. Army. Corps of Engineers, Kansas City District.

Caldwell, Joseph R.

1958 *Trend and Tradition in the Prehistory of the Eastern United States.* Memoirs of the American Anthropological Association 88.

Chapman, Jefferson

1977 *Archaic Period Research in the Lower Little Tennessee River Valley, 1975: Icehouse Bottom, Harrison Branch, Thirty Acre Island, Calloway Island.* Report of Investigations 18. University of Tennessee, Knoxville.

1985a Archaeology and the Archaic Period in the Southern Ridge-an-Valley Province. In *Structure and Process in Southeastern Archaeology*, edited by Roy S. Dickens and H. Trawick Ward, pp. 137-179. The University of Alabama Press, University.

1985b *Tellico Archaeology: 12,000 Years of Native American History*. Reports of Investigations 43, Occasional Paper 5, University of Tennessee, Knoxville.

Charles, Tommy and James L. Michie

1992 South Carolina Paleo Point Data. In *Paleoindian and Early Archaic Period Research in the Lower Southeast: A South Carolina Perspective*, edited by David G. Anderson, Kenneth E. Sassaman, and Christopher Judge, pp. 242-247. Council of South Carolina Professional Archaeologists, Columbia

Coe, Joffre

1964 *The Formative Cultures of the Carolina Piedmont*. Transactions of the American Philosophical Society 54(5).

Daniel, I. Randolph, Jr.

1992 Early Archaic Settlement in the Southeast: A North Carolina Perspective. In *Paleoindian and Early Archaic Period Research in the Lower Southeast: A South Carolina Perspective*, edited by David G. Anderson, Kenneth E. Sassaman, and Christopher Judge, pp. 68-77.

Council of South Carolina Professional Archaeologists, Columbia.

DeBow, J.D.B.
1954 *Statistical View of the United States*. A.O.P. Nicholson, Washington, D.C.

DePratter, Chester
1988 Indian Occupations of the Savannah River Valley During the Late Prehistoric and Early Historic Periods. Manuscript in the possession of the author.

Derting, Keith M., Sharon L. Pekrul, and Charles J. Rinehart
1991 *A Comprehensive Bibliography of South Carolina Archaeology*. Research Manuscript 211. South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

Duke, James A.
1961 The psammophytes of the Carolina Fall-Line Sandhills. *Journal of the Elisha Mitchell Scientific Society* 77:3-24.

Ferguson, Leland G.
1971 *South Appalachian Mississippian*. Ph.D. dissertation, University of North Carolina, Chapel Hill. University Microfilms, Ann Arbor, Michigan.

Fick, Sarah and David Schneider
1988 *Aiken County — East, South Carolina: Historical and Architectural Inventory*. Preservation Consultants, Charleston, South Carolina.

Goodyear, Albert C., John H. House, and Neal W. Ackerly
1979 *Laurens-Anderson: An Archaeological Study of the Inter-Riverine Piedmont*. Anthropological Studies 4, Occasional Papers of the Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

Gunn, Joel D. And Kathy Wilson
1993 *Archaeological Data Recovery Investigations at Sites 38CT54 and 38CT58 Along the S.C. 151 Jefferson Bypass, Chesterfield County, South Carolina*. Garrow and Associates, Raleigh. Submitted to the S.C. Department of Highways and Public Transportation, Columbia.

Kovacik, Charles F. and John J. Winberry
1987 *South Carolina: The Making of a Landscape*. University of South Carolina Press, Columbia.

Lowry, M.W.
1934 *Reconnaissance Erosion Survey of the State of South Carolina*. U.S. Department of Agriculture, Soil Conservation Service, Washington, D.C.

McAlester, Virginia and Lee McAlester
1984 *A Field Guide to American Houses*. Alfred A. Knopf, New York.

Michie, James
1977 *The Late Pleistocene Human Occupation of South Carolina*. Unpublished Honor's Thesis, Department of Anthropology, University of South Carolina, Columbia.

Mills, Robert
1972 [1826] *Statistics of South Carolina*. Reprinted. The Reprint Press, Spartanburg, South Carolina.

Oliver, Billy L.
1981 *The Piedmont Tradition: Refinement of the Savannah River Stemmed Point*

Type. Unpublished Master's thesis, Department of Anthropology, University of North Carolina, Chapel Hill.

1985 Tradition and Typology: Basic Elements of the Carolina Projectile Point Sequence. In *Structure and Process in Southeastern Archaeology*, edited by Roy S. Dickens and H. Trawick Ward, pp. 195-211. The University of Alabama Press, University.

Orser, Charles

1988 *The Material Basis of the Postbellum Tenant Plantation: Historical Archaeology in the South Carolina Piedmont*. University of Georgia Press, Athens.

Phelps, David A.

1983 Archaeology of the North Carolina Coast and Coastal Plain: Problems and Hypotheses. In *The Prehistory of North Carolina: An Archaeological Symposium*, edited by Mark A. Mathis and Jeffrey J. Crow, pp. 1-52. North Carolina Division of Archives and History, Department of Cultural Resources, Raleigh.

Rogers, Vergil A.

1985 *Soil Survey of Aiken County Area, South* Carolina. United State Department of Agriculture. Soil Conservation Service, Washington, D.C.

Ryan, Thomas M.

1972 *Archaeological Survey of the Columbia Zoological Park, Richland and Lexington Counties, South Carolina*. Research Manuscript Series 37. South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

Sassaman, Kenneth E.

1983 *Middle and Late Archaic Settlement in the South Carolina Piedmont*. Unpublished master's thesis. Department of Anthropology, University of South Carolina, Columbia.

1985 *A* Preliminary Typological Assessment of MALA Hafted Bifaces from the Pen Point Site, Barnwell County, South Carolina. *South Carolina Antiquities* 17:1-17.

1993 *Early Woodland Settlement in the Aiken Plateau: Archaeological Investigations at 38AK157, Savannah River Site, Aiken County, South Carolina*. Savannah River Archaeological Research Papers 3. South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

1995 The Cultural Diversity of Interactions Among Mid-Holocene Societies of the American Southeast. In *Native American Interactions: Multiscalar Analyses and Interpretation in the Eastern Woodlands*, edited by Michael Nassaney and Kenneth E. Sassaman, pp. 174-204. University of Tennessee Press, Knoxville.

Sassaman, Kenneth E. and David G. Anderson

1990 Typology and Chronology. In *Native-American Prehistory of the Middle Savannah River Valley*, edited by Kenneth E. Sassaman, Mark J. Brooks, Glen T. Hanson, and David G. Anderson, pp. 143-216. Savannah River Archaeological Research Publication 1. South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

1994 *Middle and Late Archaic Archaeological Records of South Carolina: A Synthesis for Research and Resource Management*. Council of South Carolina Professional Archaeologists, Columbia.

Sassaman, Kenneth E., Mark J. Brooks, Glen T. Hanson, and David G. Anderson

1990 *Native American Prehistory of the Middle Savannah River Valley*. Savannah River Archaeological Research Papers 1. Occasional Papers of the Savannah River Archaeological Research Program, South Carolina Institute of Archaeology and Anthropology, University of South Carolina.

South, Stanley A.

1959 *A Study of the Prehistory of the Roanoke Rapids Basin*. Master's thesis, Department of Sociology and Anthropology, University of North Carolina, Chapel Hill.

Trimble, Stanley W.

1974 *Man-Induced Soil Erosion on the Southern Piedmont, 1700-1970*. Soil Conservation Society of American, Ankey, Iowa.

Trinkley, Michael

1976 *A Typology of Thom's Creek Pottery for the South Carolina Coast*. Unpublished M.A. Thesis, Department of Anthropology, University of North Carolina, Chapel Hill.

1980a *Additional Investigations at 38LX5*. South Carolina Department of Highways and Public Transportation, Columbia.

1980b *Investigation of the Woodland Period along the South Carolina Coast*. Ph.D. dissertation. Department of Anthropology, University of North Carolina, Chapel Hill.

1990 *An Archaeological Context for the South Carolina Woodland Period*. Chicora Foundation Research Series 22. Chicora Foundation, Inc., Columbia, S.C.

Trinkley, Michael, Debi Hacker, and Natalie Adams

1993 *Life in the Pee Dee: Prehistoric and Historic Research on the Roche Carolina Tract, Florence County, South Carolina*. Research Series 39. Chicora Foundation, Inc., Columbia.

Wallace, David D.

1951 *South Carolina: A Short History, 1520-1948*. University of South Carolina Press, Columbia.

Walthall, John A.

1980 *Prehistoric Indians of the Southeast: Archaeology of Alabama*. University of Alabama Press, University.

Ward, Trawick

1983 A Review of Archaeology in the North Carolina Piedmont: A Study in Change. In *The Prehistory of North Carolina An Archaeological Symposium*. Edited by Mark A. Mathis and Jeffrey J. Crow, pp. 53-81. North Carolina Division of Archives and History, Raleigh.

Waring, Antonio J., Jr.

1968 The Refuge Site, Jasper County, South Carolina. In *The Waring Papers: The Collected Works of Antonio J. Waring, Jr.*, edited by Stephen B. Williams, pp. 198-208. Papers of the Peabody Museum of Archaeology and Ethnology 58.

Williams, Stephen B., editor

1965 *The Paleo-Indian Era: Proceedings of*

the 20th Southeastern Archaeological Conference. Bulletin 2. Southeastern Archaeological Conference.